

Gina Harrison  
Director  
Federal Regulatory Relations

1275 Pennsylvania Avenue, N.E.  
Washington, D.C. 20001  
(202) 383-6423

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July 13, 1995

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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF SECRETARY

**EX PARTE**

William F. Caton  
Acting Secretary  
Federal Communications Commission  
Mail Stop 1170  
1919 M Street, N.W., Room 222  
Washington, D.C. 20554

Dear Mr. Caton:

Re: *CC Docket No. 94-54 - Interconnection and Resale Obligations Pertaining to Commercial Mobile Radio Services; RM-8643 - Petition for Rulemaking of Pacific Bell Mobile Services Regarding a Plan for Sharing the Costs of Microwave Relocation; GEN Docket No. 90-314 - Amendment of the Commission's Rules to Establish New Personal Communications Services*

Yesterday, James Tuthill, Vice President, External Affairs, Steve Sidore, Director of Network Engineering, Pacific Bell Mobile Services, and I met with Gregory Rosston, John Williams, Evan Kwerel, Jonathan Cohen, and Florence Setzer, of the Office of Plans and Policy; Rudolfo Baca, Legal Advisor to Commissioner Quello; Rosalind K. Allen, Chief, Commercial Radio Division, Gerald Vaughan, Deputy Chief, John Cimko, Chief, Policy Division, and Jeff Steinberg, Wireless Telecommunications Bureau, to discuss issues summarized in the attached documents. Please associate this material with the above-referenced proceeding. In addition, we also briefly discussed the need for expedition in the microwave relocation proceeding, and briefly discussed with Messrs. Vaughan, Cimko, Steinberg, and Ms. Allen the general framework and need for expedition on our non-structural safeguards plan.

We are submitting two copies of this notice in accordance with Section 1.1206(a)(1) of the Commission's Rules.

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William F. Caton  
July 13, 1995  
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Please stamp and return the provided copy to confirm your receipt. Please contact me should you have any questions or require additional information concerning this matter.

Sincerely,

Regina M. Harrison

cc: Rosalind K. Allen  
Rudolfo Baca  
John Cimko  
Jonathan Cohen  
Evan Kwerel  
Gregory Rosston  
Florence Setzer  
Jeff Steinberg  
Gerald Vaughan  
John Williams

# THE COMMISSION SHOULD ADOPT A ROAMING RULE

COMMISSION HELP WILL BE NECESSARY  
TO ASSIST PCS's LAUNCH

July 12, 1995

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# The Industry May Not Voluntarily Promote Roaming

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- Large Cellular and PCS Companies Plan to Create National Networks:
  - » **AT&T/McCAW**
  - » **AIRTOUCH/BELL ATLANTIC/NYNEX/US WEST**
  - » **WIRELESS CO.**
- Customers of Regional and Small Providers May Be Unable to Access These Networks for Competitive Reasons.

## **A Broad Roaming Policy Should Be Adopted**

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- The Existing Part 22 Rule, 22.901 Should Be Extended to All CMRS Providers.
- This Would Allow Roaming on Cellular Analog Systems and Other PCS Systems.
- Additionally, the Rule Should Provide That Roaming Is Available on Fair and Nondiscriminatory Terms and Conditions.
- This Is Consistent With Sections 201 and 202.

**CMRS to CMRS Interconnection Is Not Necessary.**

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# Roaming Scenario 1 - Originating Call Only



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**Subscriber's Capability - Roaming subscribers are only allowed to originate calls.**

## **Contract Arrangements:**

- The subscribers' home network and visited network must have agreements on the terms and conditions to compensate one another for network usage.
- The exchange of billing information becomes part of the billing settlements process.

## **Technology Requirements:**

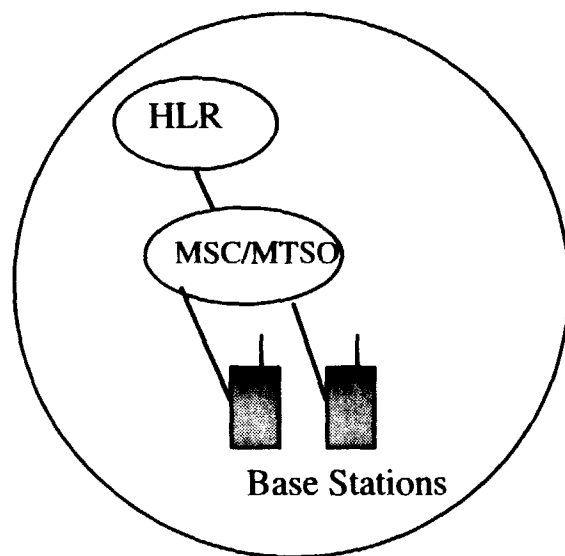
- The only technical requirement is that the subscribers' handset has an air interface compatible with the visited network.
- This may require a dual mode handset. **Dual mode handset availability (i.e. AMPS/PCS1900) is scheduled for 1Q 1996.**

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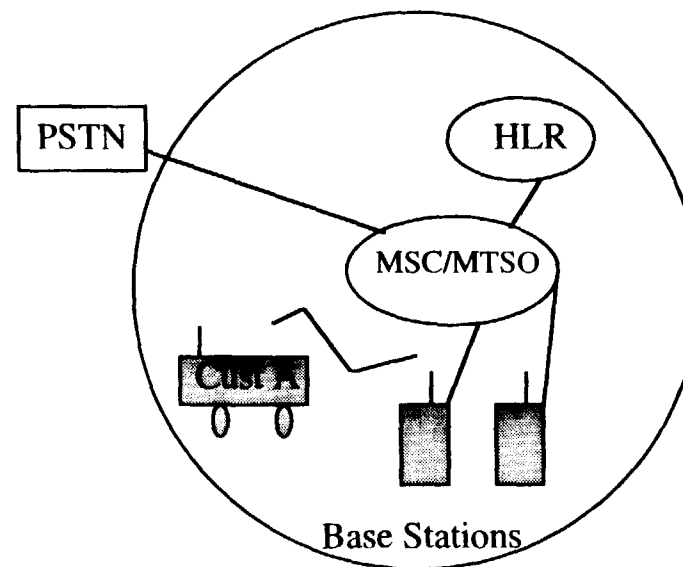
**Technical requirements are no different than used by cellular today**

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# Roaming Scenario 1 Originating Calls Only



Network A



Network B

**No CMRS to CMRS Interconnection Required**

## Roaming Scenario 2 - Originating and Terminating Calls, Same Network Technology



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Subscriber's Capability - Roaming subscribers can originate calls and have calls delivered to them.

**Contract Arrangements:** Same as Scenerio 1.

### **Technology Requirements:**

- The subscribers' handset has the same requirements as Scenerio 1.
- To enable roaming subscribers to receive calls their home network must be updated with the identification of the visited MSC /MTSO.
- Home Location Registration (HLR) for full roaming can be accomplished via several mechanisms which cellular uses today (i.e. IS-41, X.25, SS7).
- Call completion to the roaming subscriber is handled no differently than cellular today via the PSTN to the visited network.

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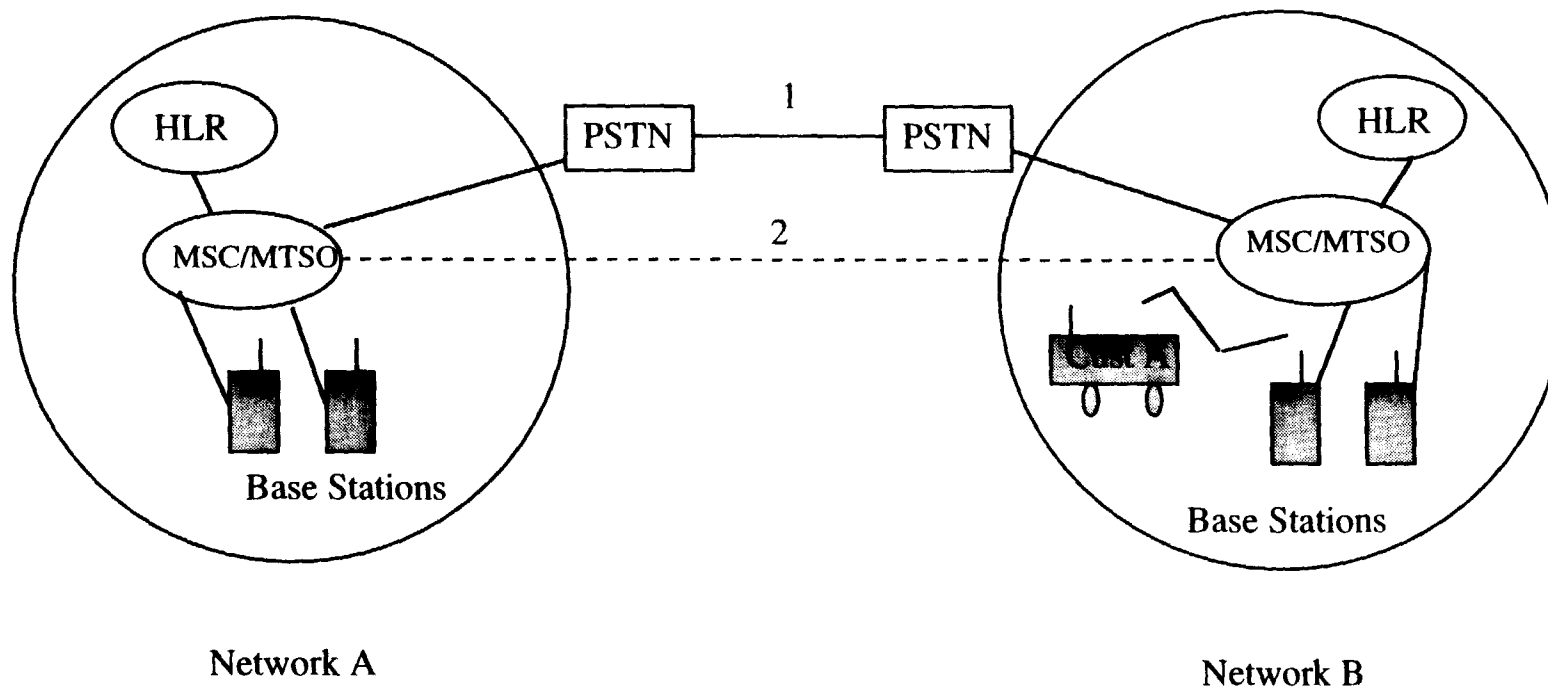
**Technical requirements are no different than used by Cellular today**

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## Roaming Scenario 2 - Originating & Terminating Calls Same Network Technology

PACIFIC BELL®  
Mobile Services



1. Terminating calls are delivered via the PSTN.
2. Signaling information exchange via an available national signaling network.

# Roaming Scenario 3 - Originating and Terminating Calls, Different Network Technology



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Subscriber's Capability - Roaming subscribers can originate calls and have calls delivered to them.

**Contract Arrangements:** Same as Scenerio 1.

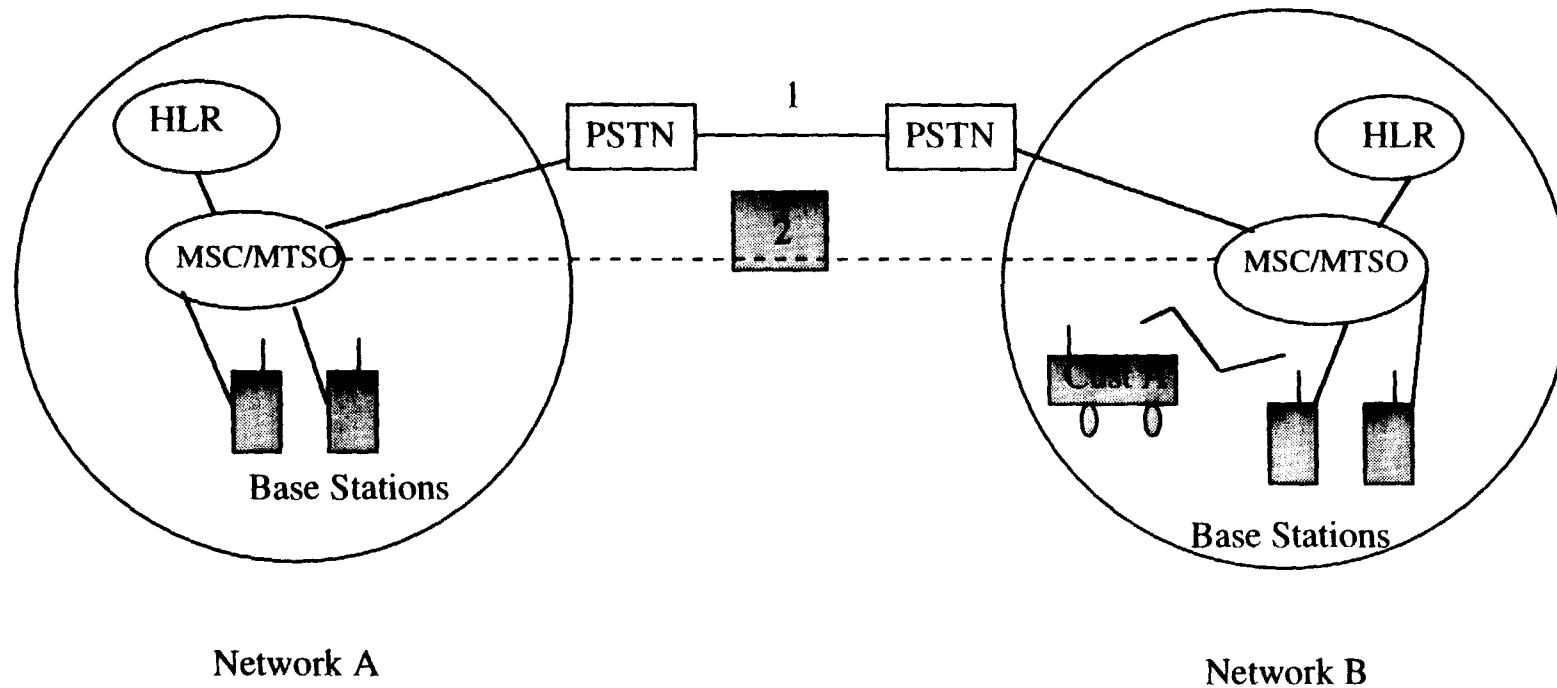
## **Technology Requirements:**

- The subscribers' handset has the same requirements as Scenerio 1.
- The subscribers' home network is updated the same way as identified in Scenerio 2.
- Call completion to the roaming subscriber is the same as Scenerio 2
- Protocol conversion will be needed to allow two networks with different technologies (i.e. PCS1900 and AMPS/IS41 ) to exchange network information messages.
- An AMPS/TDMA dual mode handset is available today.
- An AMPS/PCS1900 dual mode handset is scheduled for 1Q 1996.
- An IS-41/PCS1900 protocol converter is scheduled for 2Q 1996.

**Technical requirements are no different than used by Cellular today**

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# Roaming Scenario 3 - Originating & Terminating Calls Different Network Technology



1. Terminating calls are delivered via the PSTN.
2. Signaling information exchange via an available national signaling network with a protocol converter.

# The Sequence of Events that Support Roaming

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1. A Roaming Agreement is agreed upon and upgraded as needed.
2. The companies establish a billing settlements process. (A third party clearinghouse may be used such as GTE using the Cybernet system)
3. Billing procedures and processes are developed and implemented.
4. Roaming Agreement Database activated for roaming originated calls.
5. If the roaming subscriber is allowed to receive calls technical details on how the two networks will exchange registration and call delivery information must be specified. (*For example, both companies must agree on what national signaling network will be used to exchange network message information.*)

**These are the same processes used by Cellular today**

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